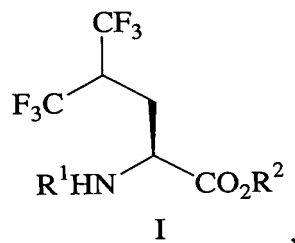


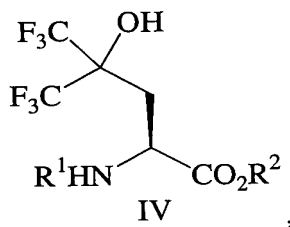
WHAT IS CLAIMED IS:

1. A method of making a compound of Formula I,



or a corresponding stereoisomer having opposite stereochemistry of Formula I, wherein  $R^1$  and  $R^2$  are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

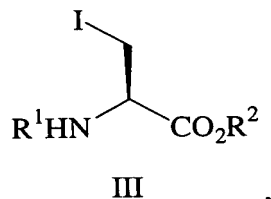
providing a compound having a tertiary hydroxy group as represented by Formula IV,



or providing a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein  $R^1$  and  $R^2$  in Formula IV are as defined in Formula I; and displacing the tertiary hydroxy group to yield the compound of Formula I or the corresponding stereoisomer.

2. The method of claim 1, wherein the tertiary hydroxy group is displaced using radical deoxygenation.

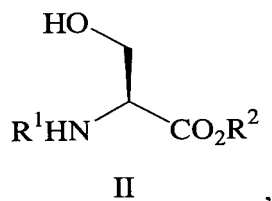
3. The method of claim 1, further comprising:  
reacting a compound of Formula III,



or a corresponding stereoisomer having opposite stereochemistry of Formula III, with zinc to form an organozinc reagent; and

reacting the organozinc reagent with hexafluoroacetone to yield the compound of Formula IV or the corresponding stereoisomer, wherein  $\text{R}^1$  and  $\text{R}^2$  in Formula III are as defined in Formula I.

4. The method of claim 3, further comprising:  
reacting a compound of Formula II,

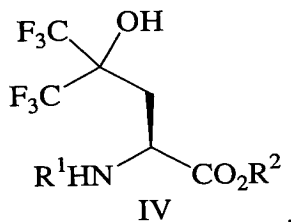


or a corresponding stereoisomer having opposite stereochemistry of Formula II, with an iodinating agent to yield the compound of Formula III or the corresponding stereoisomer, wherein  $\text{R}^1$  and  $\text{R}^2$  in Formula II are as defined in Formula I.

5. The method of claim 1, further comprising:  
de-protecting the compound of Formula I or the corresponding stereoisomer having opposite stereochemistry of Formula I by replacing  $\text{R}^1$  or  $\text{R}^2$  or both  $\text{R}^1$  and  $\text{R}^2$  with a hydrogen atom.

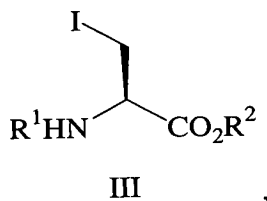
6. The method of claim 1, wherein  $\text{R}^1$  is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and  $\text{R}^2$  is alkyl or haloalkyl.

7. The method of claim 1, wherein R<sup>1</sup> is Cbz.
8. The method of claim 1, wherein R<sup>2</sup> is *tert*-butyl.
9. A method of making a compound of Formula IV,



or a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein R<sup>1</sup> and R<sup>2</sup> are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

reacting a compound of Formula III,

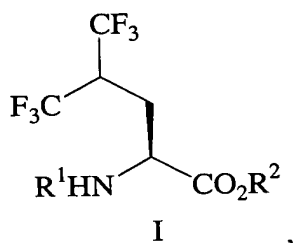


or a corresponding stereoisomer having opposite stereochemistry of Formula III, with zinc to form an organozinc reagent; and

reacting the organozinc reagent with hexafluoroacetone to yield the compound of Formula IV or the corresponding stereoisomer, wherein R<sup>1</sup> and R<sup>2</sup> in Formula III are as defined in Formula IV.

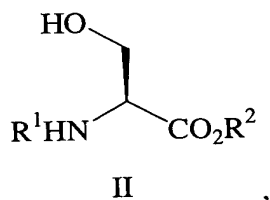
10. The method of claim 9, wherein R<sup>1</sup> is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and R<sup>2</sup> is alkyl or haloalkyl.
11. The method of claim 9, wherein R<sup>1</sup> is Cbz.
12. The method of claim 9, wherein R<sup>2</sup> is *tert*-butyl.

13. A method of making a compound represented by Formula I,

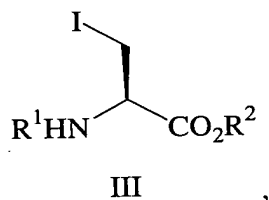


or a corresponding stereoisomer having opposite stereochemistry of Formula I, wherein  $R^1$  and  $R^2$  are *N*-terminal and *C*-terminal protecting groups, respectively, the method comprising:

reacting a compound of Formula II,



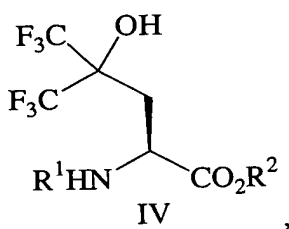
or a corresponding stereoisomer having opposite stereochemistry of Formula II, with an iodinating agent to yield a compound of Formula III,



or a corresponding stereoisomer having opposite stereochemistry of Formula III;

reacting the compound of Formula III or the corresponding stereoisomer with zinc to form an organozinc reagent;

reacting the organozinc reagent with hexafluoroacetone to form a compound having a tertiary hydroxy group as represented by Formula IV,

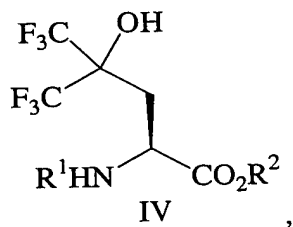


or to form a corresponding stereoisomer having opposite stereochemistry of Formula IV;

displacing the tertiary hydroxy group using radical deoxygenation to yield the compound of Formula I or the corresponding stereoisomer, wherein  $R^1$  and  $R^2$  in Formula II, Formula III, and Formula IV are as defined in Formula I.

14. The method of claim 13, further comprising:  
de-protecting the compound of Formula I or the corresponding stereoisomer having opposite stereochemistry of Formula I by replacing  $R^1$  or  $R^2$  or both  $R^1$  and  $R^2$  with a hydrogen atom.
15. The method of claim 13, wherein  $R^1$  is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and  $R^2$  is alkyl or haloalkyl.
16. The method of claim 13, wherein  $R^1$  is Cbz.
17. The method of claim 13, wherein  $R^2$  is *tert*-butyl.
18. The method of claim 13, wherein the iodinating agent is methyltriphenoxyposphonium iodide.

19. A compound of Formula IV,



or a corresponding stereoisomer having opposite stereochemistry of Formula IV, wherein  $R^1$  and  $R^2$  are, respectively, *N*-terminal and *C*-terminal protecting groups.

20. The compound of claim 19, wherein  $R^1$  is benzyl, substituted benzyl, Cbz, Boc, Fmoc, or trityl, and  $R^2$  is alkyl or haloalkyl.